# **Topics in Microeconomics (21931)**

Degree/study: ADE and Economics Course: third and fourth Term: Third Number of ECTS credits: 5 credits Hours of student's dedication: 125 hours Language or languages of instruction: English Professor: Roberto Burguet (T.A.: Alexis León)

# 1. Presentation of the subject

In this course, we will review and discuss in depth some theoretical models of trade and economic interaction among few agents. The emphasis will be on the formalization of such interactions, and how these formal models capture the essential traits in different particular economic problems.

# 2.. Competences to be attained

The student should learn to model situations where a few agents face opportunity to trade to their mutual advantage, understand the literature that deals with such situations, and be able to make predictions as to the outcomes of the most basic and standard of those situations.

# 3. Contents

- 1.-Bargaining and cooperative models of negotiation
- 1.1 The Nash bargaining problem and the Nash bargaining solution
- 1.2 Formal models and cooperative solutions concepts to multilateral interaction
- 1.3 Non cooperative protocols of bargaining and coalition formation
- 1.4 Bargaining under incomplete information
- 2.- Auctions and procurement
- 2.1 The symmetric, independent private values model: auction formats and design
- 2.2 Asymmetries, common values, risk aversion
- 2.3 Issues in procurement
- 3.-Contests and tournaments
- 3.1 Different success functions: all-pay auctions, additive noise, and Tullock contest
- 3.2 Timing and participation

3.3 Applying the theory: R&D races and internal labor markets

### 4. Assessment

The student will be examined at the end of the course of his or her abilities to answer stylized problems and questions. The student will pass the subject if s/he gets a grade of five or more in this examination. A second chance, if failing, will be offered, and again a grade of five of more in that new exam is necessary to pass.

# 5. Bibliography and teaching resources

#### 5.1. Basic bibliography

MUTHOO, Abhinay. *Barganining Theory with Applications*. Cambridge University Press, 1999. (Chapters 1, 2, 3, 5 and 9)

BURGUET, Roberto. Auction theory: A guided tour. *Investigaciones Económicas*, 2000, vol. 24, no 1, p. 3-50.

KONRAD, Kai A. Strategy and dynamics in contests. Oxford University Press, 2009.

#### 5.2. Additional bibliography

OSBORNE, Martin J.; RUBINSTEIN, Ariel. *Bargaining and markets*. San Diego: Academic press, 1990. (Chapters 1, 2, and 3)

OSBORNE, Martin J.; RUBINSTEIN, Ariel. *Course in game theory*. The MIT press, 1994. (Chapters 13 and 14)

KRISHNA, Vijay. Auction theory. Academic press, 2009.

#### **5.3.** Teaching resources

Problem sets will be periodically posted in Campus Global.

## 6. Methodology

Teaching, discussing, and working on practical questions.

# 7. Activities Planning

Seminar sessions will be scheduled during the assigned time slots.